

REMARKS

The application is amended and believed to be in condition for allowance.

Amendments to the Claims

Claims 2 and 17 are amended to recite a positioning element in place of a positioning means in order to provide antecedent agreement with parent claim 1.

Claims 1 and 18 are amended to recite more clearly that the first and second positioning elements engage and secure to each other such that the end distal portion is removably retained on said free second end of said proximal threaded stud. This amendment to claims 1 and 18 finds support in the specification, drawing figures, and claims as originally filed (e.g., page 3, lines 9-15; Figure 1; claims 3 and 4).

Claims 1 and 18 are also amended to recite a holding portion for holding the base portion in rotation. This amendment to claims 1 and 18 finds support in the specification and the drawing figures originally filed (e.g., page 4, lines 26-29; Figure 1).

New claim 22 depends from claim 18, and recites subject matter corresponding to claims 3 and 4.

Based at least on the citations provided above to the application originally filed, the foregoing amendments are non-substantive and are not believed to introduce any new matter.

Formal Matters - Section 112, second paragraph

The Official Action rejected claims 2 and 17 under 35 USC 112, second paragraph as being indefinite due to antecedent basis issues.

In response, the claims have been amended as indicated above to obviate the Official Action's rejection for indefiniteness. Withdrawal of the rejections under 35 USC 112, second paragraph is thereby respectfully requested.

Substantive Issues - Section 103

The Official Action rejected claims 1, 3, 5, 11, 15, 16 and 17 under 35 USC 103(a) as being unpatentable over Lin (US 5,613,968; "LIN") in view of Krafft (US 2,679,778; "KRAFFT").

The Official Action rejected claims 1-4, 8, 16, 18 under 35 USC 103(a) as being unpatentable over LIN in view of Craig et al. (US 5,507,817; "CRAIG").

The Official Action rejected claims 6-7 under 35 USC 103(a) as being unpatentable over LIN and KRAFFT, and further in view of Van Schwartz (US 2,404,580; "VAN SCHWARTZ").

The Official Action rejected claims 2, 9, 10 over 35 USC 103(a) as being unpatentable over LIN and KRAFFT.

The Official Action rejected claims 2, 4, 9, 10, 12 under 35 USC 103(a) as being unpatentable over LIN and KRAFFT, and further in view of Stillman et al. (US 3,545,066; "STILLMAN").

The Official Action rejected claims 18-19 under 35 USC 103(a) as being unpatentable over LIN and KRAFFT.

The Official Action rejected claims 20-21 under LIN and KRAFFT, and further in view of VAN SCHWARTZ.

The rejections are respectfully traversed for at least the reasons that follow.

As to the rejections of claims 1 and 18 over LIN and KRAFFT, the Official Action contends that LIN teaches all the features of the invention except an extension piece. The Official Action seems to indicate that LIN suggests the existence of an extension piece from a disclosure of a socket 350 for receiving what appears to be a hex-drive tool (column 4, line 65), but LIN makes no teaching of any structure associated with this tool.

In any case, the Official Action concedes that LIN fails to teach an extension piece having the structural features recited in claim 1. The Official Action offers KRAFFT as teaching a use of an extension piece having a head portion and an end distal portion as recited by claim 1.

Applicants respectfully disagree. It is respectfully submitted that neither LIN nor KRAFFT, individually or in combination, teach or suggest an extension portion configured to slidably receive said connecting part from the head portion to the end distal portion. There is further no teaching or suggestion of an extension piece having an end distal portion

with an outermost external diameter configured such that a nut, in coaxial engagement with the extension piece, slides freely over an entire length of the extension piece.

KRAFFT, at best, suggests a tool having two shanks, at least one of the shanks having a diameter or width suitable for engagement in a socket of a workpiece to be driven. These shanks, however, are connected by a spring, and KRAFFT makes no disclosure as to a diameter or width of this spring except only that Figures 1, 4 and 5 clearly teach the spring having a width at least large enough to accommodate the shanks inside the coils of the spring. There is absolutely no teaching of the spring having an outermost diameter configured so that a nut or a connecting part, in coaxial engagement with the shanks, would slide freely over an entire length of the spring.

KRAFFT further makes no teaching or suggestion to enabling an object to slide down the length of the tool to engage upon the workpiece. On the contrary, KRAFFT clearly teaches features in Figures 1, 4, and 5 that would prevent objects from sliding down the entire length of the tool. Figure 5, for example, teaches a handle 30 with a thickness at least twice or three-times as great as the shanks 31 and 32, and Figures 1 and 4 illustrate a 90-degree bend at 12 proximate to the head portion of the second shank 10.

It is respectfully submitted that these disclosures do not and cannot teach or even suggest an extension piece with an

outermost external diameter configured such that a nut, in coaxial engagement with the extension piece, slides freely over an entire length of the extension piece.

Further, any nut large enough to fit over the entire length of either of the embodiments disclosed by KRAFFT would be too large to engage in threaded engagement with the proximal threaded stud to secure the connecting part and thereby too large to satisfy the claims, and also too large to be satisfactory in combination with LIN.

Further, one of skill would not have looked to KRAFFT for a solution for guiding a nut and fixation ring from a head portion to a threaded stud. In stark contrast to the extension piece recited by claim 1, KRAFFT teaches a tool for the transmission of torque from a hand-held portion to a working portion connectable to a fastener to be turned (column 1, lines 36-51). The spring 33, for example, must be resilient such to maintain its shape or else it would not transmit torque. Nothing in KRAFFT would have reasonably suggested to one of skill a device for guiding pieces along a length of a shaft to an end point.

Further, it is respectfully submitted that the combination of KRAFFT and LIN fail to teach connecting parts configured to retain each other, as recited in claims 1 and 18 as amended (see also dependent claims 3, 4, and 22).

On the contrary, the KRAFFT's torque tool is in no way configured to retain the workpiece it is to turn, nor is there any teaching in LIN that the socket is configured to retain the tool fit into it.

Further, it is respectfully submitted that neither KRAFFT nor LIN, individually or in combination, teach a holding portion as recited in amended claim 1 and 18.

It is therefore respectfully submitted that the proposed combination of LIN with KRAFFT fails to teach or even suggest all the features recited by claim 1 and 18.

As to the rejections of claims 1 and 18 over LIN and CRAIG, the Official Action again concedes that LIN does not teach an extension piece with an outermost external diameter configured such that a nut, in coaxial engagement with the extension piece, slides freely over an entire length of the extension piece.

The Official Action offers CRAIG's distal stem extension 20 as illustrated in Figure 1a as teaching this feature. The Official Action contends that one of skill would have modified LIN to "have a second free end with an integral threaded rod and the extension piece with a tapered hole/bore, where the rod and bore are threadingly connected to each other" so that a length of the stud can be adjusted to have different lengths.

In making the proposed modification, the Official Action contends that the extension piece would "have threads to

match the threaded stud". Therefore, it is understood that CRAIG would engage over the length of the threaded portion 330 of LIN (see Figure 4), and therefore the proposed combination would include a distal stem extension 20 having a width greater than that of the threaded stud 330 of LIN.

It is respectfully submitted that the proposed modification would render LIN unsatisfactory for its intended purpose, and therefore one of skill would have had no reasonable motivation to combine the references as proposed.

Firstly, the distal-most end of LIN, either tool guiding head 330 as in Figure 2 or tool hole 350 in Figure 4, is necessary so that the double-threaded screw 300 may be driven into a bone or vertebra (see column 2, lines 38-45). No other structure is disclosed in LIN to facilitate the driving of the double-threaded screw. The proposed modification with CRAIG would cover and conceal the guiding head 330 or tool hole 350.

Secondly, in order to mate with the threaded portion 330 of LIN, the width of CRAIG's distal stem extension 20 would be larger than that of the threaded portion 330, and therefore a nut 400 configured for threaded engagement with the threaded portion 330 would not fit over the distal stem extension 20 in order to be guided onto the threaded portion 330 of LIN.

The Official Action contends that one of skill would be motivated to extend the length of the threaded stud. It is respectfully submitted that no such motivation exists. The

purpose of the portions of the LIN device above the double-threaded bone-screw 310 is to secure the bone-screw 310 to fixation rod 500 (column 3, lines 25-37). Once the fixation ring 100 and fixation rod 500 are secured, the length of the second threaded portion 330 serves no purpose, and would more likely be a nuisance or even a potential source of injury as something extending laterally from the bone (see, for example, the embodiments in Figures 4 and 5 where the length of the second threaded portion 330 is minimized).

Further, the application and removal of a distal stem extension 20 as taught by CRAIG would necessarily introduce a torque upon the double-threaded screw 310 implanted into the bone or vertebra. Securing the stem extension might further thrust the double-threaded screw 310 into the bone, while removing the stem extension would urge the double-threaded screw 310 out of the bone. Because the distal stem extension is improperly sized serve a useful purpose such as to guide the nut 400 onto the second threaded portion 330, one of skill would have had no motivation to subject the double-threaded screw 310 to this ancillary torque.

Similarly, the distal stem extension is unsuitable as a means to further tighten or loosen the double-threaded screw 310 into the bone or vertebra, because a tightening torque applied to the distal stem extension would also tighten the engagement of the distal stem extension upon the second threaded portion 330.

Removing the distal stem extension from the second threaded portion 330 would therefore transfer more torque to the double-threaded screw 310 such to unintentionally disengage the double-threaded screw 310 from the bone or vertebra.

Hence, at least for all the foregoing reasons, it is respectfully submitted that a modification to adapt the distal step extension of CRAIG to the device of LIN would render LIN unsatisfactory for its intended purpose. It is therefore respectfully submitted that one of skill would have had not motivation to have modified LIN with CRAIG.

Further, it is respectfully submitted that neither CRAIG nor LIN, individually or in combination, teach a holding portion as recited in amended claim 1 and 18.

Accordingly, it is respectfully submitted that claim 1 is patentable over LIN and CRAIG.

Based at least on the reasons set forth above, it is respectfully submitted that claim 1 is patentable over the reference applied by the Official Action.

It is also respectfully submitted that claim 18 is also patentable over the applied references for at least the same reasons as those set forth above as to claim 1.

It is further respectfully submitted that claims depending from claims 1 and 18 are patentable at least for depending from a patentable parent claim.

Reconsideration and allowance of the claims are respectfully requested.

From the foregoing, it will be apparent that Applicants have fully responded to the February 18, 2010 Official Action and that the claims as presented are patentable. In view of this, Applicants respectfully request reconsideration of the claims, as presented, and their early passage to issue.

In order to expedite the prosecution of this case, the Examiner is invited to telephone the attorney for Applicants at the number set forth below if the Examiner is of the opinion that further discussion of this case would be helpful.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Jeremy G. Mereness/
Jeremy G. Mereness, Reg. No. 63,422
209 Madison Street
Suite 500
Alexandria, VA 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

JGM/fb